



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Gerianne Tringali DiPiano, Peter Kevin Mays and John Ziemniak

Serial No.: 10/751,056

Group Art Unit: 1628

Filed: January 2, 2004

Examiner: Jennifer M. Kim

For: *PHARMACEUTICAL PREPARATIONS FOR TREATMENTS OF  
DISEASES AND DISORDERS OF THE BREAST*

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

#### **SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. § 1.56 and 37 C.F.R. § 1.97, Applicants submit a Supplemental Information Disclosure Statement, including nine (9) pages of Form PTO-1449, and copies of fifty-nine (59) of the documents cited therein. Pursuant to the waiver in the notice entitled "Information Disclosure Statements May Be Filed Without Copies of U.S. Patents and Published Applications in Patent Applications Filed After June 30, 2003" published on August 5, 2003 in 1273 OG 55, a copy of the U.S. Patents and Published Applications are not enclosed. Copies will be provided upon request, however.

A foreign language reference is marked with asterisk (\*) in the list below. The foreign document includes an English abstract, which Applicants believe satisfy the requirement for a concise explanation of the relevance of the foreign language documents under 37 C.F.R. § 1.98(a)(3).

01/29/2010 CCHAU1 00000027 503129 10751056  
01 FC:1806 180.00 DA

45104285v1

Applicants also draw the Examiner's attention to one unpublished application, U.S.S.N. 12/497,865, in the list below that may be related by subject matter to the above-referenced application. A copy of the unpublished application is not enclosed, but a copy will be provided upon request.

This Supplemental Information Disclosure Statement is being filed under 37 C.F.R. 1.97(c) after a first Office Action on the merits following a Request for Continued Examination. The Commissioner is authorized to charge \$180.00, the fee set forth under 37 C.F.R. §1.17(p), to Account No. 50-3129. It is believed that no additional fee is required with this submission. However, should a fee be required, the Commissioner is hereby authorized to charge any required fees to Deposit Account No. 50-3129.

#### **U.S. Patents**

<u>Number</u>	<u>Issue Date</u>	<u>Patentee</u>	<u>Class/Subclass</u>
3,921,636	11-25-1975	Zaffaroni	424/432
3,927,216	12-16-1975	Witkowski, et al.	424/269
4,081,533	03-28-1978	Cheesman	424/177
4,107,288	08-15-1978	Oppenheim, et al.	424/22
4,272,398	06-09-1981	Jaffe	252/316
4,286,587	09-01-1981	Wong	128/127
4,291,028	09-22-1981	Vorys	424/328
4,292,315	09-29-1981	Vorys	424/240
4,391,797	07-05-1983	Folkman, et al.	424/19
4,524,359	06-18-1985	Champagne	342/89
4,525,340	06-25-1985	Lange, et al.	424/16
4,588,724	05-13-1986	Greenway, III, et al.	514/250
4,591,496	05-27-1986	Cohen, et al.,	424/15
4,673,405	06-16-1987	Guittard, et al.	604/890
4,756,907	07-12-1988	Beck, et al.	424/178.1
4,762,717	08-09-1988	Crowly, Jr.	424/425
4,861,627	08-29-1989	Mathiowitz, et al.	427/213.31
4,873,092	10-10-1989	Azuma, et al	424/499
4,919,939	04-24-1990	Baker	424/493

U.S.S.N.: 10/751,056  
 Filed: January 2, 2004  
 SUPPLEMENTAL INFORMATION  
 DISCLOSURE STATEMENT

4,965,128	10-23-1990	Greidanus, et al.	428/398
4,997,653	03-05-1991	Igarashi, et al.	424/433
5,057,317	10-15-1991	Iida	424/423
5,091,185	02-25-1992	Castillo, et al.	424/438
5,130,137	07-14-1992	Crowley, Jr.	424/422
5,145,684	09-08-1992	Liversidge, et al.	424/489
5,156,851	10-20-1992	Castillo, et al.	424/497
5,194,259	03-16-1993	Soudant, et al.	424/401
5,324,522	06-28-1994	Krenning, et al.	424/456
5,330,768	07-19-1994	Park, et al.	424/501
5,340,585	08-23-1994	Pike, et al.	424/426
5,359,030	10-25-1994	Ekwuribe	530/303
5,362,720	11-08-1994	Labrie	514/169
5,413,797	05-09-1995	Khan, et al.	424/489
5,417,982	05-23-1995	Modi	424/486
5,434,146	07-18-1995	Labrie	514/169
5,438,040	08-01-1995	Ekwuribe	514/3
5,472,704	12-05-1995	Santus, et al.	424/435
5,482,925	01-09-1996	Hutsell	514/11
5,482,927	01-09-1996	Maniar, et al.	514/12
5,494,047	02-27-1996	Van Os	128/832
5,510,118	04-23-1996	Bosch, et al.	424/489
5,536,499	07-16-1996	Znaiden, et al.	424/401
5,552,160	09-03-1996	Liversidge, et al.	424/489
5,633,011	05-27-1997	Dong, et al.	424/451
5,643,604	07-01-1997	Angeles Uribe, et al.	424/489
5,651,976	07-29-1997	Price, et al.	424/409
5,705,170	01-06-1998	Kong, et al.	424/401
5,778,894	07-14-1998	Dorogi, et al.	128/898
5,789,442	08-04-1998	Garfield, et al.	514/561
5,843,509	12-01-1998	Calvo Salve, et al.	424/489
5,945,109	08-13-1999	Schmidt, et al.	424/401
6,071,526	06-06-2000	Schmidt, et al.	424/401
6,087,351	07-11-2000	Nyce	514/178
6,358,539	03-19-2002	Murad	424/725
6,436,428	08-20-2002	Mahashabde, et al.	424/432
6,517,864	02-11-2003	Orup Jacobsen, et al.	424/449
6,743,441	06-01-2004	Sanders, et al.	424/448
6,908,623	06-21-2005	Deaver, et al.	424/423

### U.S. Patent Applications

<u>Number</u>	<u>Publication Date</u>	<u>Patentee</u>	<u>Class/Subclass</u>
2002/0150605	10-17-2002	Yui, et al.	424/430
2003/0109507	06-12-2003	Franke, et al.	514/171
2003/0143278	07-31-2003	DiPiano, et al.	424/489
2003/0175329	09-18-2003	Azarnoff, et al.	424/449
2004/0002503	01-01-2004	Chang, et al.	514/255.04
2005/0101579	05-12-2005	Shippen	514/197
2008/0153789	06-26-2008	Dmowski, et al.	514/171
2008/0299207	12-04-2008	Martin	424/489

### U.S. Patent Applications (Not Yet Published)

<u>Number</u>	<u>Filing Date</u>	<u>Patentee</u>	<u>Class/Subclass</u>
12/497,865	07-06-2009	DiPiano, et al.	1615

### Foreign Documents

<u>Number</u>	<u>Publication Date</u>	<u>Patentee</u>	<u>Country</u>
0 501 056	09-02-1992	Igarashi, et al.	EP
0 566 135	10-20-1993	Takeda Chemical Industries	EP
767 824	02-06-1957	Organon Labor Ltd.	GB
WO 95/07071	03-16-1995	Edko Trading and Representation Co.	PCT
WO 95/31973	11-30-1995	Eastman Kodak Co.	PCT
WO 95/31974	11-30-1995	Eastman Kodak Co.	PCT
WO 96/00567	01-11-1996	Eastman Kodak, Co.	PCT
WO 96/25150	08-22-1996	Nanosystems LLC	PCT
WO 96/37232	11-28-1996	Universidade de Santiago de Compostela (ES)	PCT
WO 98/11888	03-26-1998	American Home Prod.	PCT
WO 99/24041	05-20-1999	Cellegy Pharma Inc.	PCT
WO 02/17926	03-07-2002	Unimed Pharma Inc.	PCT
WO 03/039553	05-15-2003	Pharmacia Corporation	PCT

### Publications

AKIO, "Danazol Suppository", Patent Abstracts of Japan 15(263): (C-0847) (1991).

ANDERSON, et al., "Once daily controlled versus immediate release oxybutynin chloride for urge urinary incontinence. OROS Oxybutynin Study Group," *J. Urol.* 161: 1809-1812 (1999).

BARNHART, et al., "Distribution of a spermicide containing Nonoxynol-9 in the vaginal canal and the upper female reproductive tract", *Hum Reprod.* 16(6):1151-4 (2001).

BENITA, et al., "Characterization of drug-loaded poly(*d,l*-lactide) microspheres," *J Pharm Sci* 73(12): 1721-1724 (1984).

BRAUN, et al., "Effect of danazol *in vitro* and *in vivo* on monocyte-mediated enhancement of endometrial cell proliferation in women with endometriosis," *Fertility and Sterility* 62(1): 89-95 (1994).

BRENDLER, et al., "Topical oxybutynin chloride for relaxation of dysfunctional bladders," *J. Urol.* 141(6): 1350-52 (1989).

BUYSE, et al., "Intravesical oxybutynin for neurogenic bladder dysfunction: less systemic side effects due to reduced first pass metabolism," *J. Urol.* 160: 892-896 (1998).

CICINELLI, et al., "First uterine pass effect is observed when estradiol is placed in the upper but not lower third of the vagina", *Fertility and Sterility*, 81(5):1414-1416 (2004).

COMER & GOA, "Extended-release oxybutynin," *Drugs Aging* 16: 149-155 (2000).

DAS NEVES, et al., "Gels as vaginal drug delivery systems", *Int. J. Pharm.* 2:318(1-2):1-14 (2006) Epub 2006 Mar 17.

\* DE ZIEGLER, et al., "Administration non-orale de la progestérone: Expériences et avenir de la voie transvaginale," Rev. Med. Suisse Romande pp. 13-28 (1994) (with English abstract).

FARQUHAR, et al., "Management of dysfunctional uterine bleeding," *Drugs* 44(4): 378-384 (1992).

FEMMEPHARMA, "FP1096-001 Executive Summary," (2004).

FINNIN and MORGAN, "Transdermal penetration enhancers: applications, limitations, and potential", *J. Pharm. Sci.*, 88(10):955-8 (1999).

GERAGHTY, et al., "The *in vitro* release of some antimuscarinic drugs from monoolein/water lyotropic crystalline gels," *Pharm. Res.* 13(8): 1265- 1271 (1996).

GOLDENBERG, "An extended-release formulation of oxybutynin chloride for the treatment of overactive urinary bladder," *Clin. Ther.* 21(4): 634-642 (1999).

GUPTA & SATHYAN, "Pharmacokinetics of an oral once-a-day controlled-release oxybutynin formulation compared with immediate-release oxybutynin," *J. Clin. Pharmacol.* 39: 289-296 (1999).

GUERRIERO, et al., "Influence of vaginal danazol on uterine and brain perfusion during hormonal replacement therapy", *Menopause*, 8(6); 424-428 (2001) (abstract only).

HULL, et al., "Endometriosis: An enigmatic disease," *J Women's Health* 5(2): 111-120 (1996).

IGARASHI, "A new therapy for pelvic endometriosis and uterine adenomyosis: Local effect of vaginal and intrauterine danazol application," *Asia-Oceania J. Obstet. Gynaecol.* 16(1): 1-12 (1990).

LIM, et al., "Microencapsulation of living cells and tissues," *J Pharm. Sci.* 70(4): 351-354 (1981).

LIVERSIDGE, et al., "Particle size reduction for improvement of oral bioavailability of hydrophobic drugs: I. Absolute oral bioavailability of nanocrystalline danazol in beagle dogs", *Int J Pharm.*, 125:91-97 (1995).

LOBO, et al., "Vaginal route paradox: A direct transport to the uterus," Symposium: The First Uterine Pass Effect, Wyeth-Ayerst International, Inc. (1995).

MASSAD, et al., "The pharmacokinetics of intravesical and oral oxybutynin chloride," *J. Urol.* 148: 595-597 (1992).

MATHIOWITZ, et al., "Morphology of polyanhydride microsphere delivery system," *Scanning Microscopy* 4(2): 329-340 (1990).

MATHIOWITZ, et al., "Novel microcapsules for delivery systems," *Reactive Polymers* 6: 275-283 (1987).

MATHIOWITZ, et al., "Polyanhydride microspheres as drug carriers I. Hot-melt microencapsulation," *J Controlled Release* 5:13-22 (1987).

MATHIOWITZ, et al., "Polyanhydride microspheres as drug carriers. II. Microencapsulation by solvent removal," *J Appl. Polymer Sci.* 35: 755-774 (1988).



MIZUTANI, et al., "Danazol concentration in ovary, uterus, and serum and their effect on the hypothalamic-pituitary-ovarian axis during vaginal administration of a danazol suppository," *Fertility and Sterility* 63(6): 1184-1189 (1995).

Physicians' Desk Reference, Consult 1994 Supplements for Revisions, pp. 1372-1375.

RAMJEE, et al., "Acceptability of Carraguard, a candidate microbicide and methyl cellulose placebo vaginal gels among HIV-positive women and men in Durban, South Africa", *AIDS Res Ther.* 4:20 pp.1-10 (2007).

SAITO, et al., "Treatment of overactive bladder with modified intravesical oxybutynin chloride," *Neurol. Urodyn.* 19: 683-688 (2000).

SALIB, et al., "Utilization of sodium alginate in drug microencapsulation," *Pharmazeutische Industrie* 40(11A): 1230-1234 (1978).

SCHRÖDER, et al., "Absorption of oxybutynin from vaginal inserts: drug blood levels and the response of the rabbit bladder," *Urology* 56(6): 1063-1067 (2000).

SPOONER, Classification of Side Effects to Danazol Therapy, Winthrop Laboratories, Surrey, England.

"Sultrin," Physicians' Desk Reference, 51<sup>st</sup> ed., pp. 1941 (1997).

TAKEBAYASHI, et al., "Danazol suspension injected into the uterine cervix of patients with adenomyosis and myoma. Preliminary study", *Gynecol. Obstet. Invest.*, 39(3):207-11 (1995) (abstract only).

"Terazol 7," Physicians' Desk Reference, 51<sup>st</sup> ed., pp. 1943 (1997).

The First Uterine Pass Effect – A new finding for new options in progesterone therapy, West-Ayerst Internation, Inc., pp.1-2 (1995).

THÜROFF, et al., "Randomized, double-blind, multicenter trial on treatment of frequency, urgency and incontinence related to detrusor hyperactivity: oxybutynin versus propantheline versus placebo," *J. Urol.* 145: 813-816 (1991).

VERSI, et al., "Dry mouth with conventional and controlled-release oxybutynin in urinary incontinence," *Obstet Gynecol.* 95(5): 718-721 (2000).

WAGNER, et al., "The novel progesterone receptor antagonists RTI 3021-012 and RTI 3021-022 exhibit complex glucocorticoid receptor antagonist activities: implications for the development of dissociated antiprogestins", *Endocrinology*, 140(3):1449-58 (1999).

U.S.S.N.: 10/751,056  
Filed: January 2, 2004  
SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT

WELLBERY, et al., "Diagnosis and treatment of endometriosis", *Am. Fam. Physician*, 60:1753-68 (1999).

WOLTERS KLUWER HEALTH, INC., "Summary Review: Oxybutynin Chloride 10 % Gel", *Wolters Kluwer Health, Inc.*, (2009).

YAMASHITA, et al., "Immunohistochemical determination of endometrial progesterone receptor (PR) content after intrauterine infusion of danazol in rabbits", *Nippon Naibunpi Gakkai Zasshi*, 69(10):1044-1050 (1993) (abstract only).

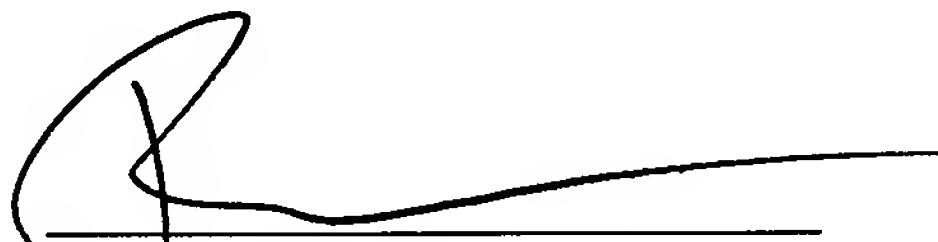
ZHANG, et al., "Synthesis and progesterone receptor antagonist activities of 6-aryl benzimidazolones and benzothiazolones", *Bioorg. Med. Chem. Lett.*, 11(20):2747-50 (2001).



### Remarks

This statement should not be interpreted as a representation that an exhaustive search has been conducted or that no better art exists. Moreover, Applicants invite the Examiner to make an independent evaluation of the cited art to determine its relevance to the subject matter of the present application. Applicants are of the opinion that their claims patentably distinguish over the art referred to herein, either alone or in combination.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Patricia L. Pabst', written over a horizontal line.

Patricia L. Pabst  
Reg. No. 31,284

Dated: January 27, 2010

PABST PATENT GROUP LLP  
1545 Peachtree Street NE  
Suite 320  
Atlanta, GA 30309  
(404) 879-2151 (Telephone)  
(404) 879-2160 (Fax)